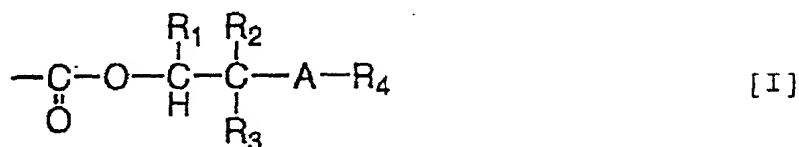


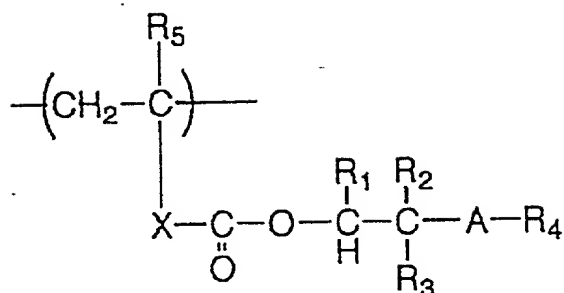
WHAT IS CLAIMED IS:

1. A positive type photoresist composition comprising a resin having an ester group represented by the following general formula [I] in its molecule and a compound generating an acid by irradiation of an active light ray or radiation:



wherein R₁ represents a hydrogen atom, an alkyl group or a cycloalkyl group; and R₂ and R₃, which may be the same or different, each represents a hydrogen atom, an alkyl group, a cycloalkyl group or -A-R₄, and R₂ and R₃ may combine together to form a ring, wherein R₄ represents a hydrogen atom, an alkyl group or a cycloalkyl group, R₄ and R₂ or R₃ may combine together to form a ring, and A represents an oxygen atom or a sulfur atom.

2. The positive type photoresist composition according to claim 1, wherein said resin is a resin containing repeating structural units represented by the following general formula [II]:

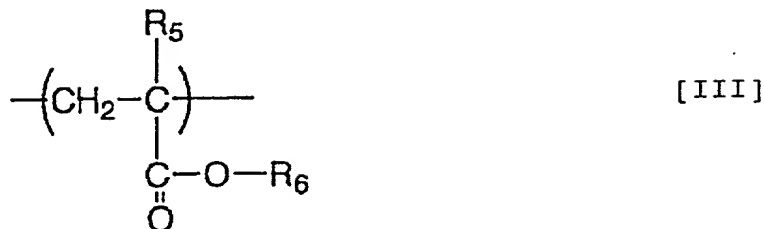


[II]

wherein R₁ to R₄ have the same meanings as given in claim 1; R₅ represents a hydrogen atom or a methyl group; and X represents one group selected from the group consisting of a single bond, an alkylene group, a substituted alkylene group, an ether group, a thioether group, a carbonyl group, an ester group, an amido group, a sulfonamido group, a urethane group and a urea group, or a combination of two or more of them.

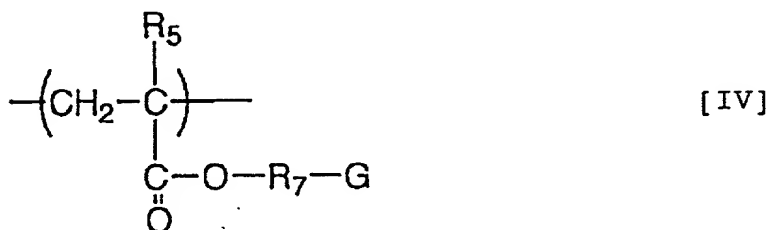
3. The positive type photoresist composition according to claim 1 or 2, wherein said resin further contains repeating structure units each having an alicyclic hydrocarbon moiety.

4. The positive type photoresist composition according to claim 3, wherein said repeating structure units each having a alicyclic hydrocarbon moiety are repeating structure units represented by the following general formula [III]:



wherein R_5 represents a hydrogen atom or a methyl group; and R_6 represents a monovalent alicyclic hydrocarbon group.

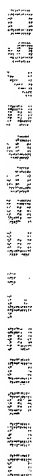
5. The positive type photoresist composition according to claim 3, wherein said repeating structure units each having a alicyclic hydrocarbon moiety are repeating structure units represented by the following general formula [IV]:



wherein R_5 represents a hydrogen atom or a methyl group; and R_7 represents a connecting group containing a divalent alicyclic hydrocarbon moiety; and G represents $-\text{COOH}$, $-\text{OH}$, $-\text{COOR}_8$ or $-\text{OR}_8$ wherein R_8 represents a tertiary alkyl group, a tetrahydropyranyl group, a tetrahydrofuryl group, $-\text{CH}_2\text{OR}_9$,

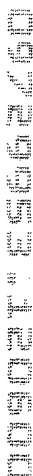
Variable	Pre-1990		1990-1999		2000-2009		2010-2019		2020-2029											
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD										
Age	45.2	12.5	48.7	13.1	52.3	14.2	55.8	15.3	59.4	16.4										
Gender	Male	52.1	Female	47.9	Male	51.5	Female	48.5	Male	50.8	Female	49.2								
Ethnicity	White	65.3	Black	23.7	Hispanic	8.9	Asian	2.1	Other	1.0	White	64.5	Black	24.2	Hispanic	9.1	Asian	2.2	Other	1.0
Education	High School	35.2	College	45.8	Postgraduate	19.0	High School	34.5	College	46.3	Postgraduate	19.2	High School	33.8	College	47.1	Postgraduate	19.1		
Income	<\$10k	28.5	\$10k-\$20k	32.1	\$20k-\$30k	25.4	\$30k-\$40k	18.7	>\$40k	15.3	<\$10k	27.9	\$10k-\$20k	33.5	\$20k-\$30k	26.1	\$30k-\$40k	19.2	>\$40k	15.8
Health Status	Good	42.1	Fair	35.6	Poor	22.3	Good	41.5	Fair	36.2	Poor	22.3	Good	40.8	Fair	37.1	Poor	22.1		
Insurance	Medicaid	38.9	Medicare	45.2	Private	15.9	Medicaid	37.5	Medicare	46.8	Private	15.7	Medicaid	36.2	Medicare	47.5	Private	16.3		
Employment	Unemployed	25.3	Employed	74.7	Unemployed	24.8	Employed	75.2	Unemployed	24.1	Employed	75.9	Unemployed	23.5	Employed	76.5				
Marital Status	Married	58.4	Single	32.1	Divorced	8.9	Married	57.2	Single	33.5	Divorced	9.3	Married	56.1	Single	34.2	Divorced	9.7		
Residence	Urban	62.5	Suburban	28.3	Rural	9.2	Urban	61.8	Suburban	29.1	Rural	9.1	Urban	60.5	Suburban	29.8	Rural	9.7		
Healthcare Access	Close	48.7	Far	51.3	Close	49.2	Far	50.8	Close	48.5	Far	51.5	Close	47.9	Far	52.1				
Healthcare Use	Regular	55.3	Occasional	38.9	Never	5.8	Regular	54.7	Occasional	39.5	Never	5.8	Regular	53.2	Occasional	40.1	Never	6.7		
Healthcare Costs	Low	32.1	Medium	45.8	High	22.1	Low	31.5	Medium	46.3	High	22.2	Low	30.8	Medium	47.1	High	22.1		
Healthcare Satisfaction	Satisfied	45.2	Dissatisfied	54.8	Satisfied	46.7	Dissatisfied	53.3	Satisfied	45.1	Dissatisfied	54.9	Satisfied	44.5	Dissatisfied	55.5				

Variable	Pre-1990		1990-1999		2000-2009		2010-2019		2020-2029											
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD										
Age	45.2	12.5	48.7	13.1	52.3	14.2	55.8	15.3	59.4	16.4										
Gender	Male	52.1	Female	47.9	Male	51.5	Female	48.5	Male	50.8	Female	49.2								
Ethnicity	White	65.3	Black	23.7	Hispanic	8.9	Asian	2.1	Other	0.0	White	64.5	Black	24.2	Hispanic	9.1	Asian	2.2	Other	0.0
Education	High School	35.2	College	45.8	Postgraduate	19.0	High School	34.5	College	46.3	Postgraduate	19.2	High School	33.8	College	47.1	Postgraduate	19.1		
Income	<\$10k	15.4	\$10k-\$20k	25.3	\$20k-\$30k	20.1	\$30k-\$40k	18.7	\$40k-\$50k	10.5	<\$10k	14.8	\$10k-\$20k	26.1	\$20k-\$30k	19.5	\$30k-\$40k	18.2	\$40k-\$50k	11.4
Health Status	Good	42.1	Fair	35.6	Poor	22.3	Good	41.5	Fair	36.2	Poor	22.3	Good	40.8	Fair	37.1	Poor	22.1		
Insurance	Medicaid	28.5	Medicare	32.1	Private	39.4	Medicaid	27.8	Medicare	33.5	Private	38.7	Medicaid	27.2	Medicare	34.2	Private	38.6		
Comorbidities	Hypertension	18.2	Diabetes	12.5	Cholesterol	15.3	Hypertension	19.1	Diabetes	13.2	Cholesterol	16.1	Hypertension	20.5	Diabetes	14.1	Cholesterol	17.2		
Medication	0	15.4	1-2	35.2	3-5	28.7	0	14.8	1-2	36.1	3-5	29.2	0	14.2	1-2	37.5	3-5	28.3		
Adherence	High	45.3	Medium	38.7	Low	16.0	High	44.8	Medium	39.2	Low	16.0	High	43.5	Medium	40.1	Low	16.4		
Quality of Life	High	55.2	Medium	48.1	Low	32.7	High	54.5	Medium	49.3	Low	33.2	High	53.8	Medium	50.1	Low	33.1		



Variable	Pre-1990		1990-1999		2000-2009		2010-2019		2020-2029											
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD										
Age	45.2	12.5	48.7	13.1	52.3	14.2	55.8	15.3	59.4	16.4										
Gender	Male	52.1	Female	47.9	Male	51.5	Female	48.5	Male	50.8	Female	49.2								
Ethnicity	White	65.3	Black	23.7	Hispanic	8.9	Asian	2.1	Other	0.0	White	64.5	Black	24.2	Hispanic	9.1	Asian	2.2	Other	0.0
Education	High School	35.2	College	45.8	Postgraduate	19.0	High School	34.5	College	46.3	Postgraduate	19.2	High School	33.8	College	47.1	Postgraduate	19.1		
Income	<\$10k	15.4	\$10k-\$20k	25.3	\$20k-\$30k	20.1	\$30k-\$40k	18.7	\$40k-\$50k	10.5	<\$10k	14.8	\$10k-\$20k	26.1	\$20k-\$30k	19.5	\$30k-\$40k	18.2	\$40k-\$50k	11.4
Health Status	Good	42.1	Fair	35.6	Poor	22.3	Good	41.5	Fair	36.2	Poor	22.3	Good	40.8	Fair	37.1	Poor	22.1		
Insurance	Medicaid	28.5	Medicare	32.1	Private	39.4	Medicaid	27.8	Medicare	33.5	Private	38.7	Medicaid	27.2	Medicare	34.2	Private	38.6		
Comorbidities	Hypertension	18.2	Diabetes	12.5	Cholesterol	15.3	Hypertension	19.1	Diabetes	13.2	Cholesterol	16.1	Hypertension	20.5	Diabetes	14.1	Cholesterol	17.2		
Medication	0	15.4	1-2	35.2	3-5	28.7	0	14.8	1-2	36.1	3-5	29.2	0	14.2	1-2	37.5	3-5	28.3		
Adherence	High	45.3	Medium	38.7	Low	16.0	High	44.8	Medium	39.2	Low	16.0	High	43.5	Medium	40.1	Low	16.4		
Quality of Life	High	55.2	Medium	48.1	Low	32.7	High	54.5	Medium	49.3	Low	33.2	High	53.8	Medium	50.1	Low	33.1		

Variable	Pre-1990		1990-1999		2000-2009		2010-2019		2020-2029											
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD										
Age	45.2	12.5	48.7	13.1	52.3	14.2	55.8	15.3	59.4	16.4										
Gender	Male	52.1	Female	47.9	Male	51.5	Female	48.5	Male	50.8	Female	49.2								
Ethnicity	White	65.3	Black	23.7	Hispanic	8.9	Asian	2.1	Other	0.0	White	64.5	Black	24.2	Hispanic	9.1	Asian	2.2	Other	0.0
Education	High School	35.2	College	45.8	Postgraduate	19.0	High School	34.5	College	46.3	Postgraduate	19.2	High School	33.8	College	47.1	Postgraduate	19.1		
Income	<\$10k	15.4	\$10k-\$20k	25.3	\$20k-\$30k	20.1	\$30k-\$40k	18.7	\$40k-\$50k	10.5	<\$10k	14.8	\$10k-\$20k	26.1	\$20k-\$30k	19.5	\$30k-\$40k	18.2	\$40k-\$50k	11.4
Health Status	Good	42.1	Fair	35.6	Poor	22.3	Good	41.5	Fair	36.2	Poor	22.3	Good	40.8	Fair	37.1	Poor	22.1		
Insurance	Medicaid	28.5	Medicare	32.1	Private	39.4	Medicaid	27.8	Medicare	33.5	Private	38.7	Medicaid	27.2	Medicare	34.2	Private	38.6		
Comorbidities	Hypertension	18.2	Diabetes	12.5	Cholesterol	15.3	Hypertension	19.1	Diabetes	13.2	Cholesterol	16.1	Hypertension	20.5	Diabetes	14.1	Cholesterol	17.2		
Medication	0	15.4	1-2	35.2	3-5	28.7	0	14.8	1-2	36.1	3-5	29.2	0	14.2	1-2	37.5	3-5	28.3		
Adherence	High	45.3	Medium	38.7	Low	16.0	High	44.8	Medium	39.2	Low	16.0	High	43.5	Medium	40.1	Low	16.4		
Quality of Life	High	55.2	Medium	48.1	Low	32.7	High	54.5	Medium	49.3	Low	33.2	High	53.8	Medium	50.1	Low	33.1		



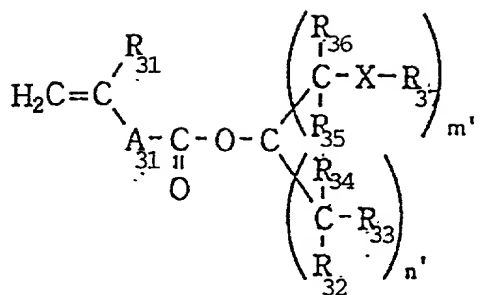
009021 65662/60

wherein R_{21} to R_{24} and m have the same meanings as given in claim 6; R_{25} represents a hydrogen atom or a methyl group; and A_{21} represents one group selected from the group consisting of a single bond, an alkylene group, a substituted alkylene group, an ether group, a thioether group, a carbonyl group, an ester group, an amido group, a sulfonamido group, a urethane group and a urea group, or a combination of two or more of them.

8. The positive type photoresist composition according to claim 6 or 7, wherein said resin further contains repeating structure units each having an alicyclic hydrocarbon moiety.

9. The positive type photoresist composition according to any one of claims 6 to 8, wherein said resin further contains repeating structure units each having a group which is decomposed by action of an acid to increase solubility in an alkali developing solution.

10. A positive type photoresist composition for far ultraviolet ray exposure comprising a resin which is decomposed by action of an acid to increase solubility in an alkali solution, and a compound generating an acid by irradiation of an active light ray or radiation, wherein said resin is a polymer containing a monomer represented by the following general formula [I-3] as one of repeating structure units:



[I-3]

wherein R_{31} represents a hydrogen atom or a methyl group; R_{32} to R_{34} , which may be the same or different, each represents a hydrogen atom or an alkyl group; R_{35} and R_{36} , which may be the same or different, each represents a hydrogen atom, an alkyl group or $\text{X}_{31}\text{R}_{37}$ wherein R_{37} is a hydrogen atom or an alkyl group, and X_{31} is an oxygen atom or a sulfur atom; A_{31} represents one group selected from the group consisting of a single bond, an alkylene group, a substituted alkylene group, an ether group, an ester group, a thioether group, a carbonyl group, an amido group, a sulfonamido group, a urethane group and a urea group, or a combination of two or more of them; and m' is 1, 2 or 3, n' is 0, 1 or 2, and the sum of m' and n' is 3.

11. The positive type photoresist composition according to claim 10, wherein said resin is a copolymer containing repeating units of a monomer represented by general formula [I-3] and a monomer having an alicyclic

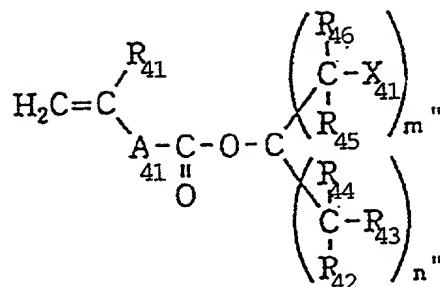
hydrocarbon moiety in its molecule.

12. The positive type photoresist composition according to claim 10 or 11, wherein the active light ray or the radiation for exposure has a wavelength of 170 nm to 220 nm.

13. The positive type photoresist composition according to claim 10 or 11, wherein said resin further contains repeating structure units each having a group which is decomposed by action of an acid to increase solubility in an alkali developing solution.

14. The positive type photoresist composition according to claim 10 or 11, wherein said composition is composed so as to give a transmission optical density of 1.0 or less per micron of coated layer in thickness to an active light ray having a wavelength of 193 nm.

15. A positive type photoresist composition for far ultraviolet ray exposure comprising a resin which is decomposed by action of an acid to increase solubility in an alkali solution, and a compound generating an acid by irradiation of an active light ray or radiation, wherein said resin is a polymer containing a monomer represented by the following general formula [I-4] as one of repeating structure units:



[I-4]

wherein R_{41} represents a hydrogen atom or a methyl group; R_{42} to R_{44} , which may be the same or different, each represents a hydrogen atom or an alkyl group; R_{45} and R_{46} , which may be the same or different, each represents a hydrogen atom, an alkyl group or a halogen atom; X_{41} represents a halogen atom; A_{41} represents one group selected from the group consisting of a single bond, an alkylene group, a substituted alkylene group, an ether group, an ester group, a thioether group, a carbonyl group, an amido group, a sulfonamido group, a urethane group and a urea group, or a combination of two or more of them; and m'' is 1, 2 or 3, n'' is 0, 1 or 2, and the sum of m'' and n'' is 3.

16. The positive type photoresist composition according to claim 15, wherein said resin is a copolymer containing repeating units of a monomer represented by general formula [I-4] and a monomer having an alicyclic hydrocarbon moiety in its molecule.

17. The positive type photoresist composition according to claim 15 or 16, wherein the active light ray or the radiation for exposure has a wavelength of 170 nm to 220 nm.

18. The positive type photoresist composition according to claim 15 or 16, wherein said resin further contains repeating structure units each having a group which is decomposed by action of an acid to increase solubility in an alkali developing solution.

19. The positive type photoresist composition according to claim 15 or 16, wherein said composition is composed so as to give a transmission optical density of 1.0 or less per micron of coated layer in thickness to an active light ray having a wavelength of 193 nm.